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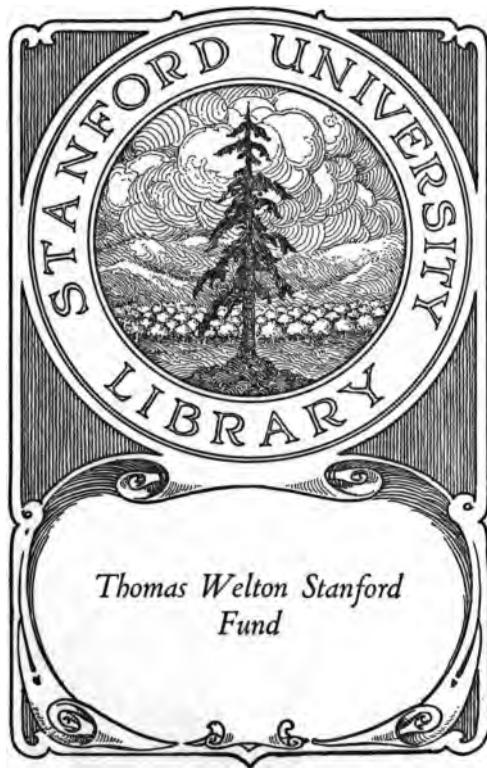
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FOR THE STANFORD REVISION  
OF THE BINET-SIMON TESTS

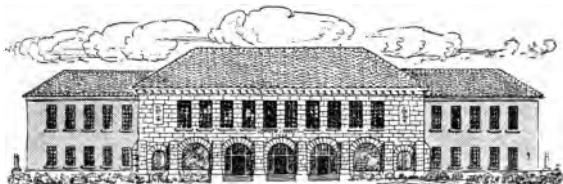
ADAPTED FOR USE WITH THE BLIND

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**TERMAN'S CONDENSED GUIDE  
FOR  
THE STANFORD REVISION  
OF THE  
BINET-SIMON INTELLIGENCE TESTS**

**ADAPTED FOR USE WITH THE BLIND**

**BY**

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	<b>PERKINS INSTITUTION</b>	
	<b>DEPARTMENT OF RESEARCH</b>	
	<b>1916</b>	

**STANFORD REVISION**

**NO. 4—APRIL, 1930**

*J. L.*

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## PREFACE

THE Binet-Simon tests had been in use in America for only a few years when their educational value for the blind was recognized by Mr. R. B. Irwin, then Supervisor of the Department for the Blind in the Cleveland public schools. In the summer of 1914 he visited Dr. H. H. Goddard at Vineland, N. J., to discuss the question of adapting them for use with pupils without vision. Taking Goddard's translation of the 1915 edition of the Binet scale as a basis, they struck out those tests which could not be given without the aid of vision, made additions from various sources, and arranged the whole collection of tests in year groups according to Irwin's judgment of the abilities of blind children. In collaboration with Dr. Goddard, Dr. E. A. Doll and Miss Elisabeth S. Kite of Vineland, Irwin was able, during the succeeding year, to have these tests tried out in various homes for blind babies, in residential schools for the blind, and in classes for the blind and the partially-seeing in the public schools.

In 1915, Irwin arranged to have Dr. T. H. Haines test the pupils of the Ohio State School for the Blind, and in 1916, Haines published a report upon his use of the year scale and presented a revision of the Yerkes Point Scale adapted to the blind. During the same period, Dr. W. B. Drummond was testing pupils in various schools for the blind in England and Scotland, and in 1920 he published a Binet Scale for the Blind and a Provisional Point Scale for the Blind, building upon the work of Irwin and Haines.

Systematic routine testing with Irwin's adaptation had also been started in 1916 by Miss Edith M. Taylor at Perkins Institution for the Blind in Watertown, Massachusetts, and by Miss Katherine Roese at the Pennsylvania Institution for the Instruction of the Blind in Overbrook, Philadelphia. During the next few years all the pupils in eight other residential schools were tested, so that by the end of 1922 the Irwin adaptation had been given to more than 1,600 subjects with defective vision. The data thus accumulated seemed to justify an attempt to standardize the tests and to distribute a Guide for the use of competent persons in schools and clinics, where it might be necessary to examine children who had not vision enough to take the Binet tests in their ordinary form.

In 1923, the writer, who had been Director of Psychological Research in the Pennsylvania Institution since 1916 and in Perkins Institution

since 1919, prepared and distributed a Provisional Guide for Testing the Blind. This was made by pasting into Terman's Condensed Guide of 1920 typed slips covering such changes as seemed at that time necessary. The arrangement of tests was based upon a careful, though incomplete statistical study of passes and failures by age groups, supplemented by the judgment of the psychologists who had used the tests continuously since 1916. Irwin had realized, very early in his work, that some of his tests were unsuitable and that others were probably placed in the wrong year groups; Haines and Drummond had both been much impressed with the importance of degree of vision and the probable differences in mental imagery according to the age of blinding, and had based their arrangements of the tests upon the results of the comparatively small number of pupils who had been totally blind from birth or early infancy. The writer was inclined to stress the practical need for a scale which would measure all children as they come to schools for the blind, as well as the advantage of comparing them with seeing children of the same ages, since his experience led him to minimize the importance of the age and degree of blinding.

The 1923 Guide was widely distributed and seems to have served its purpose fairly well. Now, however, further study of the detailed results and the accumulation of additional data through the use of the Guide with 746 more children, together with the trial of a series of supplementary tests with 418 pupils in schools for the blind, have made it possible to present a rearrangement of the tests which should be far more satisfactory. In 1923, too little acceptable material was at hand to provide six tests for all the year groups; and quite a few tests were put into year groups later than those in which Terman located them for the seeing, in order to get a scale which would give a normal distribution of intelligence quotients. It is now possible to give a full complement of tests, with some alternates, and to present an arrangement much closer to Terman's. Also, Terman's kindness in allowing this Guide to be printed insures a much more convenient book than the "scissors and paste" Guide of 1923.

Following is a list of the new tests introduced to replace those which could not be given to subjects without vision:

From Goddard and Irwin's *Binet Tests for the Blind, 1914*

IV 2 Comparison of Two Cubes

VIII 1 Knows Birthday

XIV 3 Completing Analogies

From Drummond's *A Binet Scale for the Blind, 1920*

V 3 Two digits backwards

From Knox's *Alien Mental Defectives*, 1914

X 2 Lines B, C, D from the Cube Test

XII 7 Lines E, F, G from the Cube Test

XVIII 2 Lines H, I, J from the Cube Test

From Kuhlmann's *A Handbook of Mental Tests*, 1922

VI 5 Counting Irregular Series of Four to Six Taps

X 3 Counting Irregular Series of Nine to Twelve Taps

From Herring's *Revision of the Binet-Simon Tests*, 1922

IX 5 Problematic Situations

XVI 3 Generalization

XVI 6 Proverbs

This revision may be considered a fairly trustworthy instrument for testing blind children. The intelligence quotients obtained by the use of the 1923 Guide give approximately a normal distribution curve, and retests at two year intervals show about the expected "constancy of the I.Q." The median attainment of the blind stands somewhat below that for the seeing, but this is not surprising since a similar retardation in educational achievement has long been recognized. The curves of intelligence quotients for the larger schools correspond closely to the curve of all children tested, and the curves of the school population year by year for a ten-year period in two large schools for the blind show no marked changes in the ability of the children tested. A curve of the I.Q.'s obtained when only those tests were included which could be given in the same way to the blind and to the seeing, took the normal form with its median about 10 points below Terman's curve of 1,000 seeing children. This revision should give similar results.

For convenience in scoring, a considerable number of Terman's samples of satisfactory and unsatisfactory responses have been quoted from *The Measurement of Intelligence*. The writer, however, wishes to emphasize the caution given in the preface to Terman's Guide:—"It is impossible to warn the inexperienced examiner too emphatically against the dangers inherent in the routine application of mental tests without some knowledge of their derivation, meaning and purpose. The necessary psychological background for the use of the Binet scale I have tried to supply in *The Measurement of Intelligence*, and in *The Intelligence of School Children* I have explained the practical uses of mental tests in the grading and classification of school children. It is only as a supplement to these books that the procedure of the Stanford Revision is here presented in abbreviated form."

SAMUEL P. HAYES.

Mount Holyoke College, March 27, 1930.

## TERMAN'S GENERAL DIRECTIONS

GENERAL directions for the use of the Stanford Revision have been fully set forth in chapter VIII of *The Measurement of Intelligence*. As this guide is only a handbook of procedure for the tests themselves, I shall not here undertake either to summarize that chapter or to add to it. I trust it may safely be assumed that no responsible person will attempt to apply the tests who is not familiar with the book which explains them and presents the general considerations which should govern their use.

However, extended observation of the difficulties which students and teachers encounter in learning to use the Stanford Revision has taught me that there are certain injunctions which cannot easily be too often repeated. Among these the following "ten commandments" have been selected for reemphasis here:

1. The subject's attention and coöperation must be secured. Thanks to the novelty and inherent interest of the tests, this is usually not difficult to do. But there are degrees of *rapport*, and the examiner should not be satisfied with his efforts until the subject becomes wholly absorbed in the tasks set him by the tests. The importance of tactful encouragement and a kindly, genial manner cannot be too strongly emphasized, nor, on the other hand, the risk incurred in allowing a parent to witness the test. Hardly anything is more likely to spoil an examination than the presence of a critical or over-sympathetic parent. Sometimes the teacher's presence is hardly less objectionable.
2. The correct formulas should be thoroughly learned and strictly adhered to. Unless this is done the scale used is not the Stanford Revision, whatever else it may be. For the first fifty or hundred examinations the tests should be given directly from this guide. Little by little, as the procedure becomes memorized, the examiner should attempt to free himself of the necessity of reading the formulas, but for a long time it is necessary to check up one's procedure by frequent reference to the Guide if practice in error is to be avoided.
3. The examiner should early learn to withstand the temptation of wholesale coaxing and cross-questioning. To do so often robs the response of significance and is likely to interfere with the establishment of *rapport*. A simple "What do you mean?" or, "Explain what you mean," is sufficient to clarify most answers which are not clear. At the same time the examiner should be on guard against mistaking exceptional timidity for inability to respond. Persuasive encouragement is frequently necessary, but this should not be allowed to degenerate into a chronic habit of coaxing.

4. The record should always be made as the test proceeds. Memory should never be trusted. As a rule enough of each response should be recorded to enable one to score it at any time later. The great advantage of the Record Booklet is that it permits this. Only the most expert examiner should limit his record to pluses and minuses.

5. The examination should be thorough. It should include at least one year in which there is no failure and at least one year in which there is no success. When lack of time necessitates an abbreviation of the examination, this should be done by using only the starred tests rather than by shortening the range of the examination.

6. Success in alternative tests may not be substituted for failure in one of the regular tests. Ordinarily the alternatives should be omitted. They have been included in the scale chiefly as a convenience in case materials are lacking for any of the regular tests, or in case any of the latter should be deemed for some special reason unsuitable. The ball and field test, for example, is often rendered unsuitable by coaching, and one of the alternates should always be substituted for the vocabulary test in the case of subjects whose mother tongue is other than English. Other substitutions or omissions are necessary in the case of subjects who are illiterate.

7. Care should be taken to ascertain the correct age. This is often misstated both by young normal children and by defectives. The age should be recorded in years *and months*.

8. In the ordinary calculation of the intelligence quotient without any mechanical aid (as slide rule, calculating chart, or table), both age and mental age should be reduced to months before dividing.

9. To avoid the danger of large error it is absolutely essential that the adding of credits to secure mental age and the dividing of mental age by chronological age to secure the intelligence quotient be performed twice.

10. Finally, in calculating the intelligence quotient of subjects who are more than sixteen years old, the chronological age should be counted as sixteen. It is possible, as certain army data suggest, that a lower age than sixteen should have been taken, but until the matter has been more thoroughly investigated by the use of unselected adult subjects the age sixteen will continue to be used in the Stanford Revision.

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**Note on the blind.** Since many children in schools for the blind have a little useful vision which would give them an advantage over the totally blind in certain tests, it will be advisable to blindfold all who can count fingers at two feet before beginning the tests.

## DIRECTIONS: THE TESTS<sup>1</sup>

### Year III

#### 1. *Pointing to Parts of Body*

Say, "Show me your nose." "Put your finger on your nose." If two or three repetitions of instructions bring no response, say, "Is this (touching chin) your nose?" "No?" "Then where is your nose?" Same for eyes, mouth, and hair.

Credit if correct part is indicated (in any way) three times out of four.

#### 2. *Naming Familiar Objects*

Show S., one at a time, key (not Yale), penny (not new), closed knife, watch, book. Say each time, "What is this?" or "Tell me what this is."

Credit if three responses out of five are correct.

#### 3. *Repeating Three Digits*

(Terman III Alt.)

Say, "Listen. Say 4, 2. Now say 6, 4, 1." Same for 3, 5, 2, and 8, 3, 7. May repeat (a), not others. Rate, a little faster than one digit per second. Continue up to 8 digits, using the lists of digits printed at the back of the book.

Credit if one of three is correct.

#### 4. *Giving Sex*

If S. is a boy, "Are you a little boy or a little girl?" If S. is a girl, "Are you a little girl or a little boy?" If no response, "Are you a little girl?" (if a boy); or "Are you a little boy?" (if a girl). If answer is "No," say, "Well, what are you? Are you a little boy or a little girl?" (or vice versa).

#### 5. *Giving Last Name*

Ask, "What is your name?" If answer is only first or last name, e.g., Walter, say, "Yes, but what is your other name? Walter what?" and if necessary, "Is your name Walter Smith?"

#### 6. *Repeating Sentences*

"Can you say, 'nice kitty'?" "Now say, 'I have a little dog.'" If no response, repeat first sentence two or three times. Same procedure for (b) "The dog runs after the cat" and (c) "In summer the sun is hot," except that these may be given only once.

Credit if at least one sentence is given without error after a single reading.

<sup>1</sup> Detailed directions for administering Stanford-Binet Scale and for scoring are available in Terman's *The Measurement of Intelligence*. (Riverside Textbooks in Education.) Houghton Mifflin Company.

## Year IV

### 1. *Comparison of Lines*

Show card with raised lines and say, "See these lines. Look closely and tell me which one is longer. Put your finger on the longest one." If no response, "Show me which line is the biggest." Show twice more (reversing card at second showing) and ask, "Which one is the longest here?" If only two out of three are correct, repeat the entire test.

Credit if three responses out of three, or five out of six, are correct.

### 2. *Comparison of Two Cubes*

(Goddard and Irwin IV 4)

Ask S. to hold out his hands to receive something. Place in his hands the two cubes, 15 and 22 mm. on a side, one in each hand. Say, "Give me the bigger cube." Repeat, changing the cubes about so that the larger cube will be in the other hand. S. is not allowed to fit the cubes together for comparison.

Credit if the larger cube is given both times.

### 3. *Counting Four Pennies*

Place four pennies in a pile on the table and direct S.'s hand to them. Say, "See these pennies. Count them into my hand and tell me how many there are." Put the child's finger on one penny and say, "One. Now, go ahead." If S. gives the number without counting, say, "Count them as you hand them to me." Have S. count aloud. A second trial may be given if only a minor mistake is made.

Credit if one correct count, tallying with the handling of the pennies, is made in the first or second trial.

### 4. *Repeating Sentences*

Say, "Listen; say this, 'Where is kitty?'" "Now, say this, \_\_\_\_\_," reading the first sentence in a natural voice, distinctly and with expression. May re-read the first sentence.

- (a) "The boy's name is John. He is a very good boy."
- (b) "When the train passes you will hear the whistle blow."
- (c) "We are going to have a good time in the country."

Credit if at least one sentence is repeated correctly after a single reading.

### 5. *Comprehension*

Be sure to get S.'s attention before asking question. Repeat if necessary. Allow 20 seconds for answer.

- (a) "What must you do when you are sleepy?"
- (b) "What ought you to do when you are cold?"
- (c) "What ought you to do when you are hungry?"

## Year IV

Credit if two responses of the three are correct.

In *The Measurement of Intelligence*, p. 158, Terman gives the following samples of correct responses:—

(a) "Go to bed." "Go to sleep." "Have my mother get me ready for bed." "Lie still, not talk, and I'll soon be asleep." (b) "Put on a coat" (or "cloak," "furs," "wrap up," etc.). "Build a fire." "Run and I'll soon get warm." "Get close to the stove." "Go into the house," or, "Go to bed," may possibly deserve the score plus, though they are somewhat doubtful and are certainly inferior to the responses just given. (c) "Eat something." "Drink some milk." "Buy a lunch." "Have my mamma spread some bread and butter," etc.

### 6. Repeating Four Digits

Say, "Listen. I am going to say over some numbers and after I am through, I want you to say them exactly as I do. Listen closely and get them just right." Give (a) 4, 7, 3, 9, then (b) 2, 8, 5, 4, and (c) 7, 2, 6, 1, if necessary. May repeat (a) until attempt is made, but not others. Rate, a little faster than one digit per second. Continue up to 8 digits.

Credit if one set of the three is correctly repeated in order, after a single reading.

## Year V

### 1. Comparison of Weights

Place the 3 and 15 gram weights before S., 2 or 3 inches apart. Say, "You see these blocks. They look just alike, but one of them is heavy and one is light. Try them and tell me which one is heavier." Repeat instructions if necessary, saying, "Tell me which one is the heaviest." If S. merely points without lifting blocks, or picks up one at random, say, "No, that is not the way. You must take the blocks in your hands and try them, like this." (Illustrate.) Give second trial with position of weights reversed; third trial with weights in same position as first.

Credit if two of three comparisons are correct.

### 2. Forenoon and Afternoon

(Terman VI Alt.)

If A.M., ask, "Is it morning or afternoon?"

If P.M., "Is it afternoon or morning?"

### 3. Two Digits Backwards

(Drummond V 4)

Say, "Listen carefully. I am going to read some numbers again, but this time I want you to say them backwards. For example, if I should say 3, 5, you would say 5, 3; if I should say 7, 2, you would say 2, 7. Do you understand?" Then, "Ready, now, listen carefully and be sure to say the numbers backwards." If S. gives the digits forwards, repeat the instructions. If necessary give (b) and (c),

## Year V

repeating, "Ready, now, listen carefully and be sure to say the numbers backwards."

(a) 1, 4 (b) 9, 2 (c) 5, 7

Credit if one set is repeated backwards without error. Continue up to seven digits.

### 4. *Definitions: Use or Better* (Terman V 4 revised)

Say, "You have seen a chair. You know what a chair is. Tell me, what is a chair?" If necessary urge as follows: "I am sure you know what a chair is. You have seen a chair. Now, tell me, what is a chair?" If S. rambles say, "Yes, but tell me; what is a chair?" Same for horse, spoon, baby, mamma, table.

Credit if four words out of the six are defined in terms of use or better. In *The Measurement of Intelligence*, p. 168, Terman gives the following examples of correct responses: —

Chair: "To sit on." "You sit on it." "It is made of wood and has legs and back."

Horse: "To drive." "To ride." "What people drive." "To pull the wagon." "It is big and has four legs."

Fork: "To eat with." "To stick meat with." "It is hard and has three sharp things."

Doll: "To play with." "What you dress and put to bed." "To rock."

Pencil: "To write with." "To draw." "They write with it." "It is sharp and makes a black mark."

Table: "To eat on." "What you put the dinner on." "Where you write." "It is made of wood and has legs."

### 5. *Giving Age* (Terman V Alt.)

Say, "How old are you?"

### 6. *Three Commissions* (Terman V 6 revised)

Say, "I am going to ask you to do something for me with these three things." Hand to S. a block, a spoon and a book. After S. has examined them, have him put them on the table and stand up. Move his chair back about 6 feet from the table, and have him locate the chair and the table by touching them. Next have him put the book on a second chair or table, and return to the first table. This completes the preliminaries.

Say, "Now I want you to do three things for me. First put the block on the chair behind you; then put the spoon on the floor; and then go and get the book you put on the table (or chair) and give it to me. Do you understand? Be sure to get it right. *First*, put the block on the chair behind you, *then* put the spoon on the floor, *then* bring me the book. Go ahead." Stress *First* and *then*. Give no further aid.

Credit if the three commissions are executed in the proper order.

## Year VI

### 1. *Right and Left*

Say, "Show me your right hand" (stress **right** and **hand**, etc., rather strongly and equally). Same for left ear, right eye. If there is one error, repeat whole test, using **left hand, right ear, left eye**. Avoid giving aid in any way.

Credit if three of three, or five of six responses are correct.

### 2. *Mutilated Dolls*

(Terman VI 2 revised)

Hand out the doll without a head, saying, "Here is a doll. There is something wrong with this doll. It is not all there. Part of it is gone. Look carefully and tell me what part of the doll is not there." If the correct response is not given soon, show the place where the head should be and say, "See, the head is gone." Then proceed with the other dolls in this order — right arm missing, left leg missing, right hand missing — asking in each case, "What part of this doll is gone?" Give no help with any doll after the first.

Credit if 3 of the 4 answers are correct.

### 3. *Counting Thirteen Pennies*

(Terman VI 3 revised)

Place thirteen pennies in a pile on the table and direct S.'s hand to them. Say, "See these pennies. Count them into my hand and tell me how many there are." Put the child's finger on one penny and say, "One. Now, go ahead." If S. gives the number without counting, say, "Count them as you hand them to me." Have S. count aloud. A second trial may be given if only a minor mistake is made. Credit if one correct count, tallying with the handling of the pennies, is made in the first or second trial.

### 4. *Comprehension*

(Terman VI 4 revised)

Say (a) "What's the thing to do if it is raining when you are out playing?"

(b) "What's the thing to do if you find that your house is on fire?"

(c) "What's the thing to do if you are going some place and miss your train (car)?"

May repeat a question, but do not change form.

Credit if two of three responses are correct.

In *The Measurement of Intelligence*, pp. 182-183, Terman gives the following examples of correct responses:—

## Year VI

(b) If you find that your house is on fire.

*Satisfactory.* "Ring the fire alarm," "Call the firemen," "Call for help," "Put water on it."

*Unsatisfactory.* The most common failure, accounting for nearly half of all, is to suggest finding other shelter; *e.g.*, "Go to the hotel," "Get another house," "Stay with your friends," "Build a new house." Others are: "Tell them you are sorry it burned down," "Be careful and not let it burn again," "Have it insured," "Cry," "Call the policeman."

*Doubtful.* Instead of suggesting measures to put out the fire, a good many children suggest mere escape or the saving of household articles. Responses of this type are: "Jump out of the windows," "Save yourself," "Get out as fast as you can," "Save the baby," "Get my dolls and jewelry and hurry and get out." These answers are about one seventh as frequent as the perfectly satisfactory ones, and the rule for scoring them is a matter of some importance. Under certain circumstances the logical thing to do would be to save one's self or valuables without wasting time trying to call help. There may be no help in reach, or a fire which the child imagines may be too far along for help to be effective. In order to avoid the possibility of doing a subject an injustice, it may be desirable to score such answers *plus*. We must not be too arbitrary.

(c) If you miss your train.

*Satisfactory.* The answer we expect is, "Wait for another," "Take the next car," or something to that effect.

*Unsatisfactory.* These are endless. The following are among the most common: "Wait for it to come back," "Have to walk," "Be mad," "Don't swear," "Run and try to catch it," "Try to jump on," "Don't go to that place," "Go to the next station."

*Doubtful.* The main doubtful response is, "Go home again," "Come back next day and catch another." In small or isolated towns having only one or two trains per day, this is the logical thing to do, and in such cases the score is plus.

### 5. *Counting Irregular Series of Four to Six Taps* (Kuhlmann VI 6)

Say, "I am going to tap on the table and see if you can count the number of taps. You must count to yourself and give me the number of taps when I ask you."

Tap the first series given for illustration, one tap for each dot. When necessary, carefully screen the movements of hand and arm from S.'s sight with a large cardboard. Then say, "Now, sometimes I will stop tapping and then begin again. Don't let that fool you. You count only those you hear. Now, listen; begin with one again."

Tap the remaining series in order at the rate of one square per second, tapping once for each dot, and pausing a second for each blank

## Year VI

square. Tap rather loudly with the blunt end of a pencil, or with the edge of a coin.

Illustration	•	•	•	•	•				5
a	•	•		•	•				4
b	•		•	•		•	•	•	6
c	•	•	•		•				4
d	•	•		•	•	•		•	6
e	•		•	•		•		•	5

Credit if four of the five series are correctly counted.

### 6. *Repeating Sentences*

Say, "Now listen. I am going to say something and after I am through I want you to say it over just as I do. Understand? Listen carefully and be sure to say exactly what I say." Repeat, "say exactly what I say," before reading each sentence. Do not re-read any sentence.

(a) "We are having a fine time. We found a little mouse in the trap."

(b) "Walter had a fine time on his vacation. He went fishing every day."

(c) "We will go out for a long walk. Please give me my pretty straw hat."

Credit if one sentence out of three is repeated without error, or two with not more than one error each.

### Alt. 1. Counting 10 to 1.

Say, "You can count backwards, can you not? I want you to count backwards for me from 10 to 1. Go ahead." If S. counts 1 to 10, say, "No, I want you to count backwards from 10 to 1, like this:— 10 — 9 — 8, and clear on down to 1. Now, go ahead." Have S. try, even if he says he cannot, but do not prompt.

Credit for counting from 10 to 1 within 30 seconds with not more than one error. Spontaneous corrections allowed.

## Year VII

### 1. *Giving Numbers of Fingers*

Say, "How many fingers have you on one hand?" "How many on the other hand?" "How many on both hands together?" If S. begins to count, say, "No, don't count. Tell me without counting," and repeat question.

Credit if all three questions are answered correctly and promptly without counting (5, 5, 10, or 4, 4, 8.)

### 2. *Naming Days of Week*

(Terman VII Alt. 1)

Say, "You know the days of the week, do you not? Name the days of the week for me." If response is correct, check by asking, "What day comes before Tuesday?" "Before Thursday?" "Before Friday?"

Credit if correct response is given within 15 seconds and if two of three checks are correct.

### 3. *Repeating Five Digits*

Say, "Now listen. I am going to say over some numbers and after I am through, I want you to say them exactly as I do. Listen closely and get them just right." Give (a) and if necessary (b) and (c).

(a) 3, 1, 7, 5, 9; (b) 4, 2, 8, 3, 5; (c) 9, 8, 1, 7, 6.

Do not re-read any set. Avoid grouping.

Credit if one set of the three is given correctly. Continue up to 8 digits.

### 4. *Tying Bow Knot*

Show S. a completed bow knot (shoestring tied around a pencil) and say: "You know what kind of a knot this is, don't you? It is a bow knot. I want you to take this other piece of string and tie the same kind of knot around my finger." Give S. string of same length and hold finger conveniently for S.

Credit if double bow (both ends folded in) is tied within one minute. The usual half knot as basis must not be omitted. Single bow, half credit.

### 5. *Giving Differences: Two Things* (Terman VII 5 revised)

Say, "What is the difference between an orange and a ball?" If S. does not understand, say, "You know what an orange is, do you not? You have seen an orange? And you know what a ball is. Now tell me the difference between an orange and a ball." Same for wood and glass, paper and cloth.

Credit if any real difference is given in two of three questions.

## Year VII

In *The Measurement of Intelligence*, p. 201, Terman gives the following sample responses:—

Wood and Glass.

*Satisfactory.* "Glass breaks easier than wood." "Glass breaks and wood does not." "Wood is stronger than glass." "Glass cuts you and wood doesn't." "You get splinters from wood and you don't from glass." "Glass melts and wood doesn't." "Wood burns and glass doesn't." "Wood has bark and glass hasn't." "Wood grows and glass doesn't." "Glass is heavier than wood." "Glass glistens in the sun and wood does not."

An incomplete double comparison is also counted satisfactory; as, "Wood you can burn and glass you can see through."

*Unsatisfactory.* "Wood is black and glass is white." (Color differences are always unsatisfactory in this comparison unless transparency is also mentioned.) "Glass is square and wood is round." "Glass is bigger than wood" (or vice versa). "Wood is oblong and glass is square." "Glass is thin and wood is thick." "Wood is made out of trees and glass out of windows." "There is no glass in wood."

The two most frequent types of failures are misstatements regarding color and thickness. The other failures are widely scattered.

### 6. *Three Digits Backwards*

Say, "Listen carefully. I am going to read some numbers again, but this time I want you to say them backwards. For example, if I should say 5—1—4, you would say 4—1—5. Do you understand?" Then, "Ready, now; listen carefully, and be sure to say the numbers backwards." If S. gives digits forwards, repeat instructions. If necessary, give (b) and (c), repeating, "Ready, now; listen carefully, and be sure to say the numbers backwards."

(a) 2, 8, 3; (b) 4, 2, 7; (c) 9, 5, 8.

Credit if one set is repeated backwards without error.

Continue up to seven digits.

## Year VIII

### 1. *Knows Birthday*

(Goddard VIII 6)

Say, "When is your birthday?" If S. hesitates, say, "In what month is your birthday? What day of the month?" Record answers and check up with records of school or parents.

Credit if both month and day are correctly given.

### 2. *Counting 20 to 1*

Say, "You can count backwards, can you not? I want you to count backwards for me from 20 to 1. Go ahead." If S. counts 1-20, say: "No, I want you to count backwards from 20 to 1, like

## Year VIII

this: 20—19—18, and clear on down to 1. Now, go ahead." Have S. try, even if he says he cannot, but do not prompt.

Credit for counting from 20 to 1 within 40 seconds with not more than one error. Spontaneous corrections allowed.

### 3. *Comprehension* (Terman VIII 3 revised)

Say, "What's the thing for you to do:

(a) "When you have broken something which belongs to some one else?"

(b) "When you are going somewhere and notice that you are likely to be late?"

(c) "If a playmate hits you without meaning to do it?"

Questions may be repeated once or twice, but form must not be changed.

Credit if two of three responses are correct.

In *The Measurement of Intelligence*, pp. 215-217, Terman gives the following sample responses:—

(a) If you have broken something.

*Satisfactory* responses are those suggesting either restitution or apology, or both. Confession is not satisfactory unless accompanied by apology. The following are satisfactory: "Buy a new one." "Pay for it." "Give them something instead of it." "Have my father mend it." "Apologize." "Tell them I'm sorry, that I did not mean to break it."

*Unsatisfactory.* "Tell them I did it." "Go tell my mother." "Feel sorry." "Be ashamed." "Pick it up." Mere confession accounts for over 20 per cent of all failures.

(b) In danger of being tardy.

*Satisfactory.* The expected response is, "Hurry," "Walk faster," or something to that effect. One bright city boy said he would take a car. Of the answers not obviously incorrect, nearly 95 per cent suggest hurrying. The rule ordinarily recommended is to grade all other responses minus. But this rule is too sweeping to be followed blindly. One who would use intelligence tests must learn to discriminate. "I would go back home and not go to school that day" is a good answer in those cases (fortunately rare) in which children are forbidden by the teacher to enter the schoolroom if tardy. "Go back home and get mother to write an excuse" would be good policy if by so doing the child might escape the danger of incurring an extreme penalty. When teachers inflict absurd penalties for unexcused tardiness, it is the part of wisdom for children to incur no risks! When such a response is given, it is well to inquire into the school's method of dealing with tardiness and to score the response accordingly.

*Unsatisfactory.* "Go to the principal." "Tell the teacher I couldn't help it." "Have to get an excuse." "Go to school anyway." "Get punished." "Not do it again." "Not play hooky." "Start earlier next time."

## Year VIII

### (c) Playmate hits you.

*Satisfactory* responses are only those which suggest either excusing or overlooking the act. These ideas are variously expressed as follows: "I would excuse him" (about half of all the correct answers). "I would say 'yes' if he asked my pardon." "I would say it was all right." "I would take it for a joke." "I would just be nice to him." "I would go right on playing." "I would take it kind-hearted." "I would not fight or run and tell on him." "I would not blame him for it." "Ask him to be more careful."

*Unsatisfactory* responses are all those not of the above two types; as "I would hit them back." "I would not hit them back, but I would get even some other way." "Tell them not to do it again." "Tell them to 'cut it out.'" "Tell him it's a wrong thing to do." "Make him excuse himself." "Make him say he's sorry." "Would not play with him." "Tell my mamma." "I would ask him why he did it." "He'd say 'excuse me' and I'd say 'thank you!'" "He should excuse me." "He is supposed to say 'excuse me.'"

### 4. *Naming Six Coins* (Terman VIII Alt. 1 revised)

Show nickel, penny, quarter, dime, silver dollar, and half-dollar in order, asking, "What is that?" If answer is "money," say, "Yes, but what do you call that piece of money?"

Credit if five of six coins are correctly named. Spontaneous corrections allowed.

### 5. *Definitions: Superior to Use* (Terman VIII 5 revised)

Ask, "What is a balloon?" Same for mouse, football, soldier. Do not comment on responses. May repeat questions.

Credit if two of four definitions better than use are given.

In *The Measurement of Intelligence*, pp. 222-223, Terman gives the following sample responses:—

#### (a) Balloon.

*Satisfactory.* "A balloon is a means of traveling through the air." "It is a kind of airship, made of cloth and filled with air so it can go up." "It is big and made of cloth. It has gas in it and carries people up in a basket that's fastened on to the bottom." "It is a thing you hold by a string and it goes up." "It is like a big bag with air in it." "It is a big thing that goes up."

*Unsatisfactory.* "To go up in the air." "What you go up in." "When you go up." "They go up in it." "It's full of gas." "To carry you up." "A balloon is a balloon," etc. "It is big." "They go up."

#### (b) Mouse. (Responses of blind children)

*Satisfactory.* "An animal, almost just like a rat, but not so big." "A mouse bites you, it's a little rat." "An animal, the cat likes to catch it and eat it up." "A thing that has a big long tail and squeaks and eats all your food up."

## Year VIII

"A little animal that likes cheese." "A thing that crawls around the house and is grey." "A little thing that crawls around and gets in a trap and dies." "A little animal that gnaws everything."

*Unsatisfactory.* "A thing that will bite you." "It runs, four feet." "Almost just like a frog." "A little tiny thing." "Some kind of animal." "What you catch." "Stays in cellar."

### (c) Football.

*Satisfactory.* "It is a leather bag filled with air and made for kicking." "It is a ball you kick." "It is a thing you play with." "It is made of leather and is stuffed with air." "It is a thing you kick." "It is brown and filled with air." "It is a thing shaped like a watermelon."

*Unsatisfactory.* "To kick." "To play with." "What they play with." "Boys play with it." "It's filled with air." "It is a football." "It is a basket ball." "It is round." "You kick it."

### (d) Soldier.

*Satisfactory.* "A man who goes to war." "A brave man." "A man that walks up and down and carries a gun." "It is a man who minds his captain and stands still and walks straight." "It is a man who goes to war and shoots." "It is a man who stands straight and marches."

*Unsatisfactory.* "To shoot." "To go to war." "It is a soldier." "A soldier that marches." "He fights." "He shoots." "What fights," etc. "When you march and shoot."

## 6. *Two Words in One Sentence* (Terman IX 5 revised)

Say, "You know what a sentence is, of course. A sentence is made up of some words which say something. Now I am going to give you two words, and you must make up a sentence that has these two words in it. The words are 'ball' and 'play.' Go ahead and make up a sentence that has both these words in it." Repeat instructions if necessary. May say, "See if you can tell me something and use these two words, 'ball' and 'play,' with some other words." Repeat with 'boys' and 'fun,' 'apple' and 'bite,' 'table' and 'sit.' If S. fails on the first pair, give an example, "I'll tell you something and use those two words. 'Every day I play ball.' Now see if you can tell me something and use these two words, 'boys' and 'fun.'"

Give only one trial and do not caution against making more than one sentence. Do not hurry S., but allow only one minute. Credit if a satisfactory sentence is given in two of the last three trials.

In *The Measurement of Intelligence*, pp. 243-245, Terman gives sample responses for his test with three words.

## Year IX

### 1. *Giving the Date*

Ask in order,

- (a) "What day of the week is today?"
- (b) "What month is it?"
- (c) "What day of the month is it?"
- (d) "What year is it?"

If S. gives day of month for day of week, or vice versa, repeat question with suitable emphasis. No other help.

Credit if there is no error greater than three days in (c) and no error in (a), (b), and (d). Spontaneous corrections allowed.

### 2. *Adding Three Ones and Three Twos* (Terman IX Alt. 2 revised)

Say, "Now we are going to play store. Here are three little cubes (placing child's hand upon them), and here are three bigger cubes. Each of the little cubes costs one cent; each of the big cubes costs two cents. Now tell me how much it will cost to buy all of them." If the wrong sum is given, allow a second trial, saying, "Tell me how you get it."

Credit if correct sum is given in 15 seconds on either trial.

### 3. *Making Change*

Ask, "If I were to buy 4 cents' worth of candy and should give the storekeeper 10 cents, how much money would I get back?" Similarly for 12-15 cents; 4-25 cents. S. is not allowed coins or pencil and paper. If S. forgets problem, repeat one, but not more. Spontaneous corrections allowed.

Credit if two answers of three are correct.

### 4. *Four Digits Backwards*

Say, "Listen carefully. I am going to read some numbers, and I want you to say them backwards. For example, if I should say 5-1-4, you would say, 4-1-5. Do you understand?" Then, "Ready now; listen carefully, and be sure to say the numbers backwards." If S. gives digits forwards, repeat instructions. If necessary, give (b) and (c), repeating each time, "Ready now; listen carefully, and be sure to say the numbers backwards."

- (a) 6, 5, 2, 8; (b) 4, 9, 3, 7; (c) 8, 6, 2, 9.

Continue up to seven digits.

Credit if one set is repeated backwards without error.

## Year IX

### 5. *Problematic Situations*

(Herring 14 and 10)

Say, (a) "A little boy is coming into his home crying, and holding an empty paper bag with a hole in it. What has happened?"

(b) "A big crowd has gathered around two automobiles on a busy street. The drivers are talking together and writing something. What has happened?"

(c) "What's the thing for you to do when you have failed in something you would like to do?"

If necessary say, "Explain. I don't quite understand."

Credit if two of the three responses are as good as the following:

(a) "Bag burst." "He lost some stuff."

(b) "Accident." "Wreck." "Collision." "Car broke."

(c) "Find out why you failed." "Try again." "Make better plans next time."

### 6. *Finding Rhymes*

Say, "You know what a rhyme is, of course. A rhyme is a word that sounds like another word. Two words rhyme if they end in the same sound. For example, 'hat,' 'cat,' 'rat,' 'bat,' all rhyme with one another. Now, I am going to give you one minute to find as many words as you can that rhyme with 'day.' Ready; go ahead." If S. fails, repeat explanation, and give sample rhymes for day, as say, may, pay, hay. Otherwise, proceed, "Now, you have another minute to name all the words you can think of that rhyme with 'mill.'" Same, if necessary, for spring. Do not repeat explanation after "mill" or "spring."

Credit if three rhymes in one minute are given for each of two out of three words.

### *Alt. 1. Naming the Months*

Say, "Name all the months of the year."

If correct, check by asking, "What month comes before April?" "Before July?" "Before November?"

Credit if months are correctly named within 15 seconds with not more than one error, and if two of three checks are correct.

## Year X

### 1. Vocabulary

See page 43.

If both lists are given, 20 satisfactory definitions are required; if only one list is given, the requirement is 10.

### 2. Lines B, C, D from the Knox Cube Test

S. sits opposite the examiner with his left hand in an easy position, palm upward, on his knee. His fingers should be fairly well extended and held comfortably apart, but without strain. Say, "I am going to touch all your fingers except your thumb with the rubber tip of a pencil. Please watch carefully, for when I am through, I want you to touch your fingers exactly as I did, using the first finger of your other hand. Do not begin touching them until I have finished." Then tap out line A at the rate of about two taps per second, and at the end say, "Now you do it." If S. fails to give line A correctly, it is repeated again and again until he succeeds. No other line may be repeated by the examiner, but S. may correct himself and receive credit.

Credit if one of the three lines is correct, after practice with  
A 1 2 3 4.      B 1 3 2 4      C 1 4 3 2      D 1 4 2 3

If S. succeeds in passing, continue with lines E, F, G and record the result in Year XII 7.

### 3. Counting Irregular Series of Nine to Twelve Taps

(Kuhlmann X 4)

Say, "I am going to tap on the table and see if you can count the number of taps. You must count to yourself, and give me the number when I ask you." Then tap the series given for illustration, a tap for each dot; when necessary, screening the movements of your hand and arm from the child's sight with a large cardboard. Then say, "Now, I will not always tap regularly as I did this time, but irregularly; first, fast; then slow; and all mixed up. Be careful to count just those you hear, no more or less. Now listen. Begin with one again." Then tap the remaining series in order at the rate of one square per second, tapping once for each dot, and pausing a second for each blank square. Tap rather loudly with the blunt end of a pencil or with the edge of a coin.

**Year X**

Illustration	.	.	.	.	.	.	.	.	.	.	.	10
a	.	.	.	.	.	..	.	.	.	.	.	9
b	.	.	..	.	.	.	.	.	..	.	.	10
c	.		.	...	.		.	..	.	..	.	12
d	.	..	.		.	.	.	..	.	.	.	11
e	.	..	.		.	..	.	.	..	.	.	12

Credit if three of the five series are counted correctly.

**4. Reading and Report**

on the hands.

in bed, a fireman was buried  
 In saving a girl who was asleep  
 seventeen families lost their homes.  
 was fifty thousand dollars, and  
 some time to put it out. The loss  
 near the center of the city. It took  
 fire last night burned three houses  
 New York, September 5th. A

Show selection and say, "I want you to read this for me as well as you can." Pronounce for S. all words he cannot make out, allowing not over 5 seconds' hesitation. (Record reading time and errors.) When S. has finished, say, "Very well done. Now, tell me what you read. Begin at the first and tell everything you can remember." When S. stops, ask, "And what else?"

## Year X

Credit if selection is read within 35 seconds with not more than two errors, and if report given contains at least eight "memories" as separated above. Minor changes in wording allowed. Scoring is done by checking word groups on record blank.

NOTE: Ability to read by touch varies widely among children with defective vision, irrespective of intelligence. If a child has not sufficient vision to read the printed type, the selection should be read by the examiner and credited if eight memories are given in 60 seconds.

### 5. *Finding Likenesses: Two Things* (Terman VIII 4)

Say, "I am going to name two things which are alike in some way, and I want you to tell me *how* they are alike."

(a) "Wood and coal: in what way are they alike?" If difference is given, say, "No, I want you to tell me *how* they are alike. In what way are wood and coal alike?"

(b) "In what way are an apple and a peach alike?"

(c) "In what way are iron and silver alike?"

(d) "In what way are a ship and an automobile alike?"

Credit if any real likeness is given for two of the four pairs.

In *The Measurement of Intelligence*, pp. 219-220, Terman gives the following sample responses:—

(a) Wood and coal.

*Satisfactory.* "Both burn." "Both keep you warm." "Both are used for fuel." "Both are vegetable matter." "Both come from the ground." "Can use them both for running engines." "Both hard." "Both heavy." "Both cost money."

*Unsatisfactory.* Most frequent is the persistent giving of a difference instead of a similarity. This accounts for a little over half of all the failures. About half of the remainder are cases of inability to give any response. Incorrect statements with regard to color are rather common. Sample failures of this type are: "Both are black," or "Both the same color." Other failures are: "Both are dirty on the outside." "You can't break them." "Coal burns better." "Wood is lighter than coal."

(b) An apple and a peach.

*Satisfactory.* "Both are round." "Both the same shape." "They are about the same color." "Both nearly always have some red on them." "Both good to eat." "Can make pies of both of them." "Both can be cooked." "Both mellow when they are ripe." "Both have a stem" (or seeds, skin, etc.). "Both come from trees." "Can be dried in the same way." "Both are fruits." "Both green (in color) when they are not ripe."

*Unsatisfactory.* "Both taste the same." "Both have a lot of seeds." "Both have a fuzzy skin." "An apple is bigger than a peach." "One is red and one is white."

## Year X

### (c) Iron and silver.

*Satisfactory.* "Both are metals" (or minerals). "Both come out of the ground." "Both cost money." "Both are heavy." "Both are hard." "Both can be melted." "Both can be bent." "Both used for utensils." "You manufacture things out of both of them." "Both can be polished."

*Unsatisfactory.* "Both thin (or thick)." "Sometimes they are the same shape." "Both the same color." "A little silver and lots of iron weigh the same." "Both made by the same company." "They rust the same." "You can't eat them."

### (d) A ship and an automobile.

*Satisfactory.* "Both means of travel." "Both go." "You ride in them." "Both take you fast." "They both use fuel." "Both run by machinery." "Both have a steering gear." "Both have engines in them." "Both have wood in them." "Both can be wrecked." "Both break if they hit a rock."

*Unsatisfactory.* "Both black" (or some other color). "Both very big." "They are made alike." "Both run on wheels." "Ship is for the water and automobile for the land." "Ship goes on water and an automobile sometimes goes in water." "An auto can go faster." "Ship is run by coal and automobile by gasoline."

## 6. Naming Sixty Words

Say, "Now, I want to see how many different words you can name in 3 minutes. When I say ready, you must begin and name the words as fast as you can, and I will count them. Do you understand? Be sure to do your very best, and remember that just any words will do, like 'clouds,' 'dog,' 'chair,' 'happy,' — ready; go ahead." Whenever there is a pause of 15 seconds, say, "Go ahead as fast as you can. Any words will do." Don't allow sentences or counting; if attempted, interrupt with "Counting (or sentences) not allowed. You must name separate words. Go ahead."

Credit if 60 words, exclusive of repetitions, are given in three minutes. If time is limited one minute may be given and 28 words required.

### Alt. 1. Repeating Six Digits

"Now listen. I am going to say over some numbers and after I am through I want you to say them exactly as I do. Listen closely and get them just right." Give (a) and if necessary (b).

(a) 3, 7, 4, 8, 5, 9; (b) 5, 2, 1, 7, 4, 6.

Continue up to 8 digits.

Credit if one set is given without error.

## Year X

### Alt. 2. Repeating Sentences

Say, "Now, listen: I am going to say something and after I am through I want you to say it over just as I do. Understand? Listen carefully and be sure to say exactly what I say." Repeat, "Say exactly what I say," before reading each sentence. Do not re-read any sentence.

(a) The apple tree makes a cool, pleasant shade on the ground where the children are playing.

(b) It is nearly half-past one o'clock; the house is very quiet and the cat has gone to sleep.

(c) In summer the days are very warm and fine; in winter it snows and I am cold.

Credit if one sentence out of three is repeated without error, or two with not more than one error each.

### Alt. 3. Three Words in One Sentence

(Terman IX 5)

Say, "You know what a sentence is, of course. A sentence is made up of some words which say something. Now, I am going to give you three words, and you must make up a sentence that has all three words in it. The three words are 'boy,' 'river,' 'ball.' Go ahead and make up a sentence that has all three words in it." Repeat instructions if necessary, but *do not illustrate*. May say, "The three words must be put with some other words so that all of them together will make a sentence." Give only one trial, and do not caution against making more than one sentence. Do not hurry S., but allow only one minute. Then say, "Now make a sentence that has in it the three words 'work,' 'money,' 'men.'" If necessary, give (c) *desert, rivers, lakes*, in the same way.

Credit if satisfactory sentence is given in two of three trials.

In *The Measurement of Intelligence*, pp. 243-245, Terman gives the following sample responses:—

(a) Boy, ball, river.

*Satisfactory.* An analysis of 128 satisfactory responses gave the following classification:—

1. Simple sentence containing a simple subject and a simple predicate; as: "The boy threw his ball into the river." "The boy lost his ball in the river." "The boy's ball fell into the river." "The boy swam into the river after his ball."

2. A sentence with a simple subject and a compound predicate; as: "A boy went to the river and took his ball with him."

## Year X

3. A complex sentence containing a relative clause; as: "The boy ran after his ball which was rolling toward the river."

4. A compound sentence containing two independent clauses; as: "The boy had a ball and he lost it in the river."

*Unsatisfactory.* The failures fall into four chief groups:—

1. Sentences with three clauses (or else three separate sentences).

2. Sentences containing an absurdity.

3. Sentences which omit one of the key words.

4. Silence due ordinarily to inability to comprehend the task.

Samples of group 1 are: "There was a boy, and he bought a ball, and it fell into the river." "I saw a boy, and he had a ball, and he was playing by the river." Illustration of an absurd sentence, "The boy was swimming in the river and he was playing ball."

(b) Work, money, men.

*Satisfactory:*—

1. Sentence with a simple subject and simple predicate; as: "Men work for their money." "Men get money for their work," etc.

2. A complex sentence with a relative clause; as: "Men who work earn much money." "It is easy for men to earn money if they are willing to work."

3. A compound sentence with two independent, coördinate clauses: "Men work and they earn money." "Some men have money and they do not work."

*Unsatisfactory:*—

1. Three clauses; as: "I know a man and he has money, and he works at the store."

2. Sentences which are absurd or meaningless; as: "Men work with their money."

3. Omission of one of the words.

4. Inability to respond.

(c) Desert, rivers, lakes.

*Satisfactory:*—

1. Sentences with a simple subject and a simple predicate; as: "There are no rivers or lakes in the desert." "The desert has one river and one lake."

2. A complex sentence with a relative clause; as: "In the desert there was a river which flowed into a lake."

3. A compound sentence with two independent, coördinate clauses: "We went to the desert, and it had no rivers or lakes."

4. A compound, complex sentence; as: "There was a desert, and near by there was a river that emptied into a lake."

*Unsatisfactory:*—

1. Sentences with three clauses; as: "A desert is dry, rivers are long, lakes are rough."

2. Sentences containing an absurdity; as: "The desert, river, and lakes are filled with swimming boys." "The lake went through the desert and the river." "There was a desert and rivers and lakes in the forest." "The desert is full of rivers and lakes."

3. Omission of one of the words.

4. Inability to respond.

## Year XII

### 1. Vocabulary

See page 43.

30 satisfactory definitions if both lists are given; 15 if only one list is given.

### 2. Definitions: Abstract Words

Say, "What is pity?" "What do you mean by pity?" etc. If response contains word to be defined, ask, "Yes, but what does it mean to pity some one?" Same for revenge, envy, charity, justice. Question S. if response is not clear.

Credit if three of the five words are satisfactorily defined.

In *The Measurement of Intelligence*, pp. 282-284, Terman gives the following sample responses:—

#### (a) Pity.

*Satisfactory.* "To be sorry for some one." "To feel compassion." "To have sympathy for a person." "To feel bad for some one else." "It means you help a person out and don't like to have him suffer." "To have a feeling for people when they are treated wrong." "If anybody gets hurt real bad you pity them." "It's when you feel sorry for a tramp and give him something to eat." "If some one is in trouble and you know how it feels to be in that condition, you pity him." "You see something that's wrong and have your feeling aroused."

*Unsatisfactory.* "To think of the poor." "To be good to others." "To help." "It means sorrow." "Mercy." "To cheer people up." "It means 'What a pity!'" "To be ashamed." "To be sick or poor." "It's when you break something."

#### (b) Revenge.

*Satisfactory.* "To get even with some one." "To get back on him." "To do something to the one who has done something to you." "To hurt them back." "To do something mean in return." "To pay it back," or "Do something back." "To square up with a person." "When somebody slaps you, you slap back." "You kill a person if he does something to you."

*Unsatisfactory.* "To be mad." "You try to hurt them." "To fight." "You hate a person." "To kill them." "It means hateful." "To try again." "To think evil of some one." "To hate some one who has done you wrong." "To let a person off." "To go away from something."

#### (c) Envy.

*Satisfactory.* "You envy some one who has something you want." "It's the way you feel when you see some one with something nicer than you have." "It's when a poor girl sees a rich girl with nice dresses and things." "You hate some one because they've got something you want." "Jealousy" (satisfactory if subject can explain what jealousy means; otherwise it is minus). "It's when you see a person better off than you are."

## Year XII

*Unsatisfactory.* "To hate some one," or simply "To hate." "You don't like 'em." "Bad feeling toward any one." "To be a great man or woman." "Not to be nice to people." "What we do to our enemies."

### (d) Charity.

*Satisfactory.* "To give to the poor." "To help those who are needy." "It is charity if you are poor and somebody helps you." "To give to somebody without pay."

*Unsatisfactory.* "A person who helps the poor." "A place where poor people get food and things." "It is a good life." "To be happy." "To be poor." "Charity is being treated good." "It is to be charitable." "Charity is selling something that is not worth much." "It means to be good" or "to be kind." When the last named response is given, we should say: "Explain what you mean." If this brings an amplification of the response to "It means to do things for the poor," or the equivalent, the score is plus. "Charity means love" is also minus if the statement cannot be further explained and is merely rote memory of the passage in the 13th chapter of 1st Corinthians. Simply "To help" or "to give" is unsatisfactory. Half of the failures are due to inability to reply.

### (e) Justice.

*Satisfactory.* "To give people what they deserve." "It means that everybody is treated the same way, whether he is rich or poor." "It's what you get when you go to court." "If one does something and gets punished, that's justice." "To do the square thing." "To give everybody his due." "Let every one have what's coming to him." "To do the right thing by any one." "If two people do the same thing and they let one go without punishing, that is not justice."

*Unsatisfactory.* "It means to have peace." "It is where they have court." "It's the Courthouse." "To be honest." "Where one is just." (Minus unless further explained.) "To do right." (Minus, unless in explaining *right*, the subject gives a definition of *justice*.)

It is very necessary, in case of such answers as "Justice is to do right," "to be just," etc., that the subject be urged to explain further what he means. "To do right" includes nearly 12 per cent of all answers, and is given by the very brightest children. Most of these are able, when urged, to complete the definition in a satisfactory manner.

### 3. Arranging Five Weights

(Terman IX 2 revised)

Place 3, 6, 9, 12, and 15 gram weights before S., direct his hand to them and say, "Here are five blocks. They are all exactly the same size, but of different weights. Some are heavy, some are not so heavy, and some are still lighter. No two weigh the same. I want you to find the heaviest one and put it here (taking hold of S.'s left hand and directing it to a place on his left), then I want you to find the one that is just a little lighter and put it here (moving S.'s hand

## Year XII

a little to the right) and the next lighter one here, and the next lighter one here, and the lightest of all at this end" (indicating a place for each).

"Do you understand?" Whatever S. replies, repeat the instructions thus: "Remember that no two blocks weigh the same. Find the heaviest and put it here, and the next heaviest here, and lighter, and lighter, until you have the very lightest here. Go ahead." Give second, and if necessary, third trial, repeating instructions only if S. has used an absurd procedure. Do not show S. the correct method.

Credit for correct arrangement in two of three trials.

### 4. Comprehension

(Terman X 5)

Ask in order,

(a) "What ought you to say when some one asks your opinion about a person you don't know very well?"

(b) "What ought you to do before undertaking (beginning) something very important?"

(c) "Why should we judge a person more by his actions than by his words?"

May repeat, but not change, question except to substitute *beginning* in (b) in case *undertaking* seems not to be understood.

Credit if two or three replies are satisfactory.

In *The Measurement of Intelligence*, pp. 269-271, Terman gives the following sample responses: —

(a) When some one asks your opinion.

*Satisfactory.* "I would say I don't know him very well." "Tell him what I know and no more." "I would say that I'd rather not express any opinion about him." "Tell him to ask some one else." "I would not express any opinion."

*Unsatisfactory.* Unsatisfactory responses are due either to failure to grasp the import of the question, or to inability to suggest the appropriate action demanded by the situation.

The latter form of failure is the more common; *e.g.*, "I'd say they are nice." "Say you like them." "Say what I think." "Say it's none of their business." "Tell them I mind my own business." "Say I would get acquainted with them." "Say that I don't talk about people." "Say I didn't know how he looked." "Tell them you ought not to say such things; you might get into trouble." "I wouldn't say anything." "I would try to answer." "Say I did not know his name," etc.

The following are samples of failure due to mistaking the import of the question: "I'd say, 'How do you do?'" "Say, 'I'm glad to meet you.'"

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### (b) Before undertaking something important.

*Satisfactory* responses fall into the following classes:—

1. Brief statement of preliminary consideration; as: "Think about it." "Look it over." "Plan it all out." "Make your plans." "Stop and think."
2. Special emphasis on preliminary preparation and correct procedure; as: "Find out the best way to do it." "Find out what it is." "Get everything ready." "Do every little thing that would help you." "Get all the details you can." "Take your time and figure it out."
3. Asking help; as: "Ask some one to help you who knows all about it." "Pray, if you are a Christian." "Ask advice," etc.
4. Preliminary testing of ability, self-analysis, etc.; as: "Try something easier first." "Practice and make sure I could do it." "Learn how to do it."
5. Consider the wisdom or propriety of doing it: "Think whether it would be best to do it." "See whether it would be possible."

*Unsatisfactory* responses are of the following types:—

1. Due to mistaking the import of the question; e.g.: "Ask for it." "One ought to say please." "Ask whose it is." Replies of this kind can be nearly all eliminated by repeating the question, using *beginning* instead of *undertaking*.
2. Replies more or less absurd or irrelevant; as: "Promise to do your best." "Wash your face and hands." "Get a lot of insurance." "Dress up and take a walk." "Tell your name." "Know whether it's correct." "Begin at the beginning." "Say you will do it." "See if it's a fake." "Go to school a long time." "Pass an examination." "Do what is right." "Add up and see how much it will cost." "Say I would do it." "Just start doing it." "Go away." "Consult a doctor." "See if you have time."

### (c) Why we should judge a person more by his actions than by his words.

*Satisfactory* responses fall into the following classes:—

1. Words and deeds both mentioned and contrasted in reliability; as: "Actions speak louder than words." "You can tell more by his actions than by his words." "He might talk nice and do bad things." "Sometimes people say things and don't do them." "It's not what you say but what you do that counts." "Talk is cheap; when he does a thing you can believe it." "People don't do everything they say." "A man might steal but talk like a nice man."
2. Acts stressed without mention of words; as: "You can tell by his actions whether he is good or not." "If he acts nice he is nice." "Actions show for themselves."
3. Emphasis on unreliability of words; as: "You can't tell by his words, he might lie or boast." "Because you can't always believe what people say."
4. Responses which state that a man's deeds are sometimes better than his words; as: "He might talk ugly and still not do bad things." "Some really kind-hearted people scold and swear." "A man's words may be worse than his deeds."

## Year XII

*Unsatisfactory* responses are usually due to inability to comprehend the meaning of the question. If there is complete lack of comprehension the result is either silence or a totally irrelevant response. If there is partial comprehension of the question the response may be partially relevant, but fail to make the expected distinction.

The following are sample failures:—

“You could tell by his words that he was educated.” “It shows he is polite if he acts nice.” “Sometimes people aren’t polite.” “Actions show who he might be.” “Acts may be foolish.” “Words ain’t right.” “A man might be dumb.” “A fellow don’t know what he says.” “Some people can talk, but don’t have control of themselves.” “You can tell by his acts whether he goes with the right people.” “If he doesn’t act right, you know he won’t talk right.” “Actions show if he has manners.” “Might get embarrassed and not talk good.” “He may not know how to express his thoughts.” “He might be a rich man but a poor talker.” “He might say the wrong thing and afterwards be sorry for it.”

### 5. *Absurdities*

(Terman X 2)

Say, “I am going to read a sentence which has something foolish in it, some nonsense. Listen carefully and tell me what is foolish about it.” After reading say, “What is foolish about that?” Give sentences twice if necessary, repeating exactly. If response is ambiguous, ask S. what he means.

(a) A man said: “I know a road from my house to the city which is down hill all the way to the city and down hill all the way back home.”

(b) An engineer said that the more cars he had on his train, the faster he could go.

(c) There was a railroad accident yesterday, but it was not very serious. Only 48 people were killed.

(d) A bicycle rider, being thrown from his bicycle in an accident, struck his head against a stone and was instantly killed. They picked him up and carried him to a hospital, and they do not think he will get well again.

(e) Yesterday the police found the body of a girl cut into 18 pieces. They believe that she killed herself.

Credit if four responses out of five are satisfactory.

In *The Measurement of Intelligence*, pp. 256-258, Terman gives the following sample responses:—

## Year XII

### (a) The road downhill.

*Satisfactory.* "If it was downhill to the city it would be uphill coming back." "It can't be downhill both directions." "That could not be." "That is foolish. (Explain.) Because it must be uphill one way or the other." "That would be a funny road. (Explain.) No road can be like that. It can't be downhill both ways."

*Unsatisfactory.* "Perhaps he took a little different road coming back." "I guess it is a very crooked road." "Coming back he goes around the hill." "The man lives down in a valley." "The road was made that way so it would be easy." "Just a road. I don't see anything foolish." "He should say, 'a road which goes.' "

### (b) What the engineer said.

*Satisfactory.* "If he has more cars he will go slower." "It is the other way. If he wants to go faster he mustn't have so many cars." "The man didn't mean what he said, or else it was a slip of the tongue." "That's the way it would be if he was going downhill." "Foolish, because the cars don't help pull the train." "He ought to say *slower*, not *faster*."

*Unsatisfactory.* "A long train is nicer." "The engine pulls harder if the train has lots of cars." "That's all right. I suppose he likes a big train." "Nothing foolish; when I went to the city I saw a train that had lots of cars and it was going awfully fast." "He should have said, 'the faster I can *run*.' "

### (c) The railroad accident.

*Satisfactory.* "That was very serious." "I should like to know what you would call a serious accident!" "You could say it was not serious if two or three people were killed, but forty-eight, — that is serious."

*Unsatisfactory.* "It was a foolish mistake that made the accident." "They couldn't help it. It was an accident." "It might have been worse." "Nothing foolish; it's just sad."

### (d) The bicycle rider.

*Satisfactory.* "How could he get well after he was already killed?" "Why, he's already dead." "No use to take a dead man to the hospital." "They ought to have taken him to a graveyard."

*Unsatisfactory.* "Foolish to fall off a bicycle. He should have known how to ride." "They ought to have carried him home. (Why?) So his folks could get a doctor." "He should have been more careful." "Maybe they can cure him if he isn't hurt very bad." "There's nothing foolish in that."

## Year XII

(e) The girl who was thought to have killed herself.

*Satisfactory.* "She could not have cut herself into eighteen pieces." "She would have been dead before that." "She might have cut two or three pieces off, but she couldn't do the rest." (Laughing) "Well, she may have killed herself; but if she did it's a sure thing that some one else came along after and chopped her up." "That policeman must have been a fool. (Explain.) To think that she could chop herself into eighteen pieces."

*Unsatisfactory.* "Think that she killed herself; they *know* she did." "They can't be sure. Some one may have killed her." "It was a foolish girl to kill herself." "How can they tell who killed her?" "No girl would kill herself unless she was crazy." "It ought to read: 'They think that she committed suicide.'"

### 6. Five Digits Backwards

"Listen carefully; I am going to read some numbers, and I want you to say them backwards. For example, if I should say 5—1—4, you would say 4—1—5. Do you understand?" Then, "Ready now; listen carefully, and be sure to say the numbers backwards." If S. gives digits forwards, repeat instructions. If necessary, give (b) and (c), repeating each time, "Ready now; listen carefully, and be sure to say the numbers backwards."

(a) 3, 1, 8, 7, 9; (b) 6, 9, 4, 8, 2; (c) 5, 2, 9, 6, 1.

Continue up to seven digits.

Credit if one set is repeated backwards without error.

### 7. Lines E, F, G from the Knox Cube Test

Give the test as described under X 2, above, practicing with Line A 1 2 3 4 and then testing with Lines E, F, G.

Credit if one of the three lines is correct.

E 1 3 2 4 3      F 1 4 3 2 4      G 1 3 1 2 4

If S. succeeds in passing, continue with lines H, I, J and record the result in Year XVIII 2.

### 8. Finding Likenesses: Three Things

Say, "I am going to name three things which are alike in some way, and I want you to tell me *how* they are alike. Snake, cow, and sparrow; in what way are they alike?" May repeat or urge with, "I'm sure you can tell me how a snake, a cow, and a sparrow are alike," but do not change form of question. If difference is given, say, "No, I want you to tell me how they are *alike*. In what way are a snake, a cow, and a sparrow alike?" Same for (b) book, teacher, newspaper; (c) wool, cotton, leather; (d) knife-blade, penny, piece of wire; (e) rose, potato, tree.

Credit if any real similarity is given in three out of five trials.

In *The Measurement of Intelligence*, pp. 307-308, Terman gives the following examples of correct responses: —

## Year XII

### (a) Snake, cow, sparrow.

*Satisfactory.* "All are animals" (or creatures, etc.). "All live on the land." "All have blood" (or flesh, bones, eyes, skin, etc.). "All move about." "All breathe air." "All are useful" (plus only when subject can give a use which they have in common). "All have a little intelligence" (or sense, instinct, etc.).  
*Unsatisfactory.* "All have legs." "All are dangerous." "All feed on grain" (or grass, etc.). "All are much afraid of man." "All frighten you." "All are warm-blooded." "All get about the same way." "All walk on the ground." "All can bite." "All holler." "All drink water." "A snake crawls, a cow walks, and a sparrow flies" (or some other difference). "They are not alike."

### (b) Book, teacher, newspaper.

*Satisfactory.* "All teach." "You learn from all." "All give you information." "All help you get an education." "All are your good friends" (plus if subject can explain how). "All are useful" (plus if subject can explain how).  
*Unsatisfactory.* "All tell you the news." "A teacher writes, and a book and paper have writing." "They are not alike." "All read." "All use the alphabet."

### (c) Wool, cotton, leather.

*Satisfactory.* "All used for clothing." "We wear them all." "All grow" (plus if subject can explain). "All have to be sent to the factory to be made into things." "All are useful" (plus if subject can give a use which all have in common). "All are valuable" (plus if explained).

*Unsatisfactory.* "All come from plants." "All grow on animals." "All came off the top of something." "All are things." "They are pretty." "All spell alike." "All are furry" (or soft, hard, etc.).

### (d) Knife-blade, penny, piece of wire.

*Satisfactory.* "All are made from minerals" (or metals). "All come from mines." "All are hard material."

*Unsatisfactory.* "All are made of steel" (or copper, iron, etc.). "All are made of the same metal." "All cut." "All bend easily." "All are used in building a house." "All are worthless." "All are useful in fixing things." "All have an end." "They are small." "All weigh the same." "Can get them all at a hardware store." "You can buy things with them." "You buy them with money." "One is sharp, one is round, and one is long" (or some other difference).

Such answers as "All are found in a boy's pocket," or "Boys like them," are not altogether bad, but hardly deserve to be called satisfactory. "All are useful" is minus unless the subject can give a use which they have in common, which in this case he is not likely to do. Bizarre uses are also minus; as: "All are good for a watch fob," "Can use all for paper weights."

### (e) Rose, potato, tree.

*Satisfactory.* "All are plants." "All grow from the ground." "All have leaves" (or roots, etc.). "All have to be planted." "All are parts of nature." "All have colors."

*Unsatisfactory.* "All are pretty." "All bear fruit." "All have pretty flowers." "All grow on bushes." "All are valuable" (or useful). "They grow close to a house." "All are ornamental." "All are shrubbery."

## Year XIV

### 1. Vocabulary

See page 43.

40 satisfactory definitions if both lists are given; 20 if only one list is given.

### 2. Interpretation of Fables

(Terman XII 5)

Present fables in order given below. Say, "You know what a fable is? Fables, you know, are little stories which teach us a lesson. I am going to read a fable to you. Listen carefully, and when I am through, I will ask you to tell me what lesson the fable teaches us." After reading, say, "What lesson does that teach us?" Question S. if response is not clear. Proceed with (b), (c), (d), and (e) thus: "Here is another. Listen again and tell me what lesson this fable teaches us." After each ask, "What lesson does that teach us?"

#### (a) HERCULES AND THE WAGONER

A man was driving along a country road, when the wheels suddenly sank in a deep rut. The man did nothing but look at the wagon and call loudly to Hercules to come and help him. Hercules came up, looked at the man, and said: "Put your shoulder to the wheel, my man, and whip up your oxen." Then he went away and left the driver.

#### (b) THE MILKMAID AND HER PLANS

A milkmaid was carrying her pail of milk on her head, and was thinking to herself thus: "The money for this milk will buy 4 hens; the hens will lay at least 100 eggs; the eggs will produce at least 75 chicks; and with the money which the chicks will bring I can buy a new dress to wear instead of the ragged one I have on." At this moment she looked down at herself, trying to think how she would look in her new dress; but as she did so the pail of milk slipped from her head and dashed upon the ground. Thus all her imaginary schemes perished in a moment.

#### (c) THE MILLER, HIS SON, AND THE DONKEY

A miller and his son were driving their donkey to a neighboring town to sell him. They had not gone far when a child saw them and cried out: "What fools those fellows are to be trudging along on foot when one of them might be riding." The old man, hearing this, made his son get on the donkey, while he himself walked. Soon they came upon some men. "Look," said one of them, "see that lazy boy riding while his old father has to walk." On hearing this the miller made his son get off, and he climbed upon the donkey himself. Farther on they met a company of women, who shouted out: "Why, you lazy old fellow, to ride along so comfortably while your poor boy there can hardly keep pace by the side of you!" And so the good-natured miller took his boy up behind him and both of them rode. As they came to the town a citizen said to them, "Why, you cruel fellows! you two are better able to carry the

## Year XIV

poor little donkey than he is to carry you." "Very well," said the miller, "we will try." So both of them jumped to the ground, got some ropes, tied the donkey's legs to a pole and tried to carry him. But as they crossed the bridge the donkey became frightened, kicked loose and fell into the stream.

### (d) THE FOX AND THE CROW

A crow, having stolen a bit of meat, perched in a tree and held it in her beak. A fox, seeing her, wished to secure the meat, and spoke to the crow thus: "How handsome you are! and I have heard that the beauty of your voice is equal to that of your form and feathers. Will you not sing for me, so that I may judge whether this is true?" The crow was so pleased that she opened her mouth to sing and dropped the meat, which the fox immediately ate.

### (e) THE FARMER AND THE STORK

A farmer set some traps to catch cranes which had been eating his seed. With them he caught a stork. The stork, which had not really been stealing, begged the farmer to spare his life, saying that he was a bird of excellent character, that he was not at all like the cranes, and that the farmer should have pity on him. But the farmer said: "I have caught you with these robbers, the cranes, and you have got to die with them."

Credit in Year XIV if score is 4 points or more; in Year XVI if score is 8 points or more. Allow 2 points for each fable for correct, and 1 for partially correct response. (Note carefully scoring directions in *The Measurement of Intelligence*, pp. 290-297.)

### 3. Completing Analogies

(Goddard XIV 5)

Say, "If I say to you, 'Ship is to water as train is to something else,' what do you think that something else is?" Repeat "Ship is related to water as train is related to what?" If S. does not comprehend, ask him what a ship is used for, and when he gets the idea that a ship goes on water, ask him what a train runs on. When he answers, "Track, railroad, or rails," put another question: "Man is related to boy as woman is related to what?" If necessary, use an illustration backwards, as follows: "Girl is related to woman in the same way that boy is related to man. Find the relation between the first and the second, and carry that relation over to the third and fourth. Now please answer the following for yourself."

- (a) Oyster is to shell as banana is to ?
- (b) Arm is to elbow as leg is to ?
- (c) Head is to hat as hand is to ?
- (d) Truth is to falsehood as straight line is to ?
- (e) Storm is to calm as war is to ?
- (f) Known is to unknown as present is to ?

Credit if four of the six are given correctly.

## Year XIV

### Answers:

- (a) Skin, peeling
- (b) Knee
- (c) Glove, mitten
- (d) Crooked line
- (e) Peace
- (f) Future, absent.

### 4. Problem Questions

Say, "Listen, and see if you can understand what I read." Then read the problem slowly and with expression. If necessary, re-read problem.

(a) A man who was walking in the woods near a city stopped suddenly, very much frightened, and then ran to the nearest policeman, saying that he had just seen hanging from the limb of a tree a \_\_\_\_\_ a what?

If response is not clear, say, "Explain what you mean."

(b) My neighbor has been having queer visitors. First, a doctor came to his house, then a lawyer, then a minister (preacher or priest). What do you think had happened there?

If response is simply "a death," etc., check up by asking what the lawyer came for.

(c) An Indian who had come to town for the first time in his life saw a white man riding along the street. As the white man rode by, the Indian said: "The white man is lazy; he walks sitting down." What was the white man riding on that caused the Indian to say, "He walks sitting down?"

Credit if two of the three problems are satisfactorily answered. Spontaneous corrections allowed. (See *The Measurement of Intelligence*, pp. 316-318, for important scoring directions.)

### 5. Arithmetical Reasoning

(Terman XIV 5 revised)

Read the following problems to S. slowly one at a time, re-reading them if S. wishes to hear them again.

(a) If a man's salary is \$20 a week, and he spends \$14 a week, how long will it take him to save \$300?

(b) If two pencils cost five cents, how many pencils can you buy for 50 cents?

(c) At 15 cents a YARD, how much will 7 FEET of cloth cost?

Credit if two of the three problems are correctly solved, within one minute each, not including the time spent in reading.

## Year XIV

### 6. *Reversing Hands of Clock*

Say, "Suppose it is six-twenty-two o'clock, that is, twenty-two minutes after six; can you see in your mind where the large hand would be, and where the small hand would be?" "Now, suppose the two hands of the clock were to trade places, so that the large hand takes the place of the small hand, and the small hand takes the place where the large hand was, what time would it then be?" Repeat the test with the hands at 8:08 (8 minutes after 8), and again with the hands at 2:46 (14 minutes before 3).

Credit if two of the three problems are solved with error of no more than 3 or 4 minutes (4:30-4:35, 1:40-1:45, 9:10-9:15).

### Alt. 1. *Repeating Seven Digits*

"Now listen. I am going to say over some numbers and after I am through, I want you to say them exactly as I do. Listen closely and get them just right." Give (a) and if necessary (b).

(a) 2, 1, 8, 3, 4, 6, 9; (b) 9, 7, 2, 8, 4, 3, 5.

Continue up to 8 digits.

Credit if one set is reproduced without error.

### Alt. 2. *President and King*

Say, "There are three main differences between a president and a king; what are they?" If S. stops after one difference is given, urge him on, if possible, until three are given.

Credit if two of the three correct answers are given. The three differences relate to power, tenure, and manner of accession. Only these differences are considered correct, and the successful response must include at least two of the three.

## Year XVI

### 1. *Vocabulary*

See page 43.

50 satisfactory definitions if both lists are given; 25 if only one list is given.

### 2. *Interpretation of Fables*

See Year XIV 2 for procedure.

Allow 2 points for each fable correctly interpreted, and 1 if response is somewhat inferior to the standard. Credit in XIV if score is 4 points or more; in XVI if score is 8 points or more. (Note carefully scoring in *The Measurement of Intelligence*, pp. 290-297.)

## Year XVI

### 3. Generalization

(Herring 27)

Say, "These four sayings all have just the same meaning. What is that meaning?"

"Drinking the sea dry"

"Catching the wind in a net"

"Gathering grapes from thistles"

"Touching the end of a rainbow."

Credit if S. makes a response that indicates that these are *impossibilities*.

### 4. Enclosed Boxes

Show S. a small cardboard box, and say, "Listen carefully. You see this box; suppose it has two smaller boxes inside of it, and that each one of the smaller boxes contains a little tiny box. How many boxes are there altogether, counting the big one?" Allow one-half minute, record answer, then show second box, saying, "Suppose this box has two smaller boxes inside, and that each of the smaller boxes contains two tiny boxes. How many altogether?" Similarly for (c) and (d), using three and three, and four and four. Emphasize slightly the words "three," and "four."

Credit if three of the four problems are solved correctly within one-half minute each. Spontaneous corrections are counted as correct. The answers are 5, 7, 13 and 21 boxes.

### 5. Six Digits Backwards

Say, "Listen carefully. I am going to read some numbers, and I want you to say them backwards. For example, if I should say 5—1—4, you would say 4—1—5. Do you understand?" Then, "Ready now; listen carefully, and be sure to say the numbers backwards." If S. gives digits forwards repeat instructions. If necessary, give (b) and (c), repeating each time, "Ready now; listen carefully, and be sure to say the numbers backwards."

(a) 4, 7, 1, 9, 5, 2; (b) 5, 8, 3, 2, 9, 4; (c) 7, 5, 2, 6, 3, 8.

Continue up to seven digits.

Credit if one set is repeated backwards without error.

### 6. Proverbs

(Herring 19)

Say, "A proverb tells some well-known truth. Here is a proverb: 'Every path has its puddle.' What does that mean?"

## Year XVI

If the child fails, explain: "That means that no matter what we try to do, we are apt to find something hard or unpleasant in it."

"Here is another proverb: 'Paddle your own canoe.' What does that mean?"

Repeat with (b) and (c)

(b) Don't cry over spilt milk.

(c) Rome was not built in a day.

Pronounce "puddle," "paddle," and "spilt" distinctly.

If instead of an abstract reply another valid concrete illustration is given, credit. Literal interpretations are not accepted. If S. asks for the meaning of a word, give it.

Credit if two of the three responses are as good as the following:

(a) "Be independent." "Do things for yourself."

(b) "Make the best of it and don't cry." "Don't worry about it because you can't help it."

(c) "You can't do anything big in a hurry."

### Alt. 1. *Repeating Sentences*

Say, "Now listen. I am going to say something and after I am through I want you to say it over just as I do. Understand? Listen carefully and be sure to say exactly what I say." Repeat "Say exactly what I say" before reading each sentence. Do not re-read any sentence.

(a) Walter likes very much to go on visits to his grandmother, because she always tells him many funny stories.

(b) Yesterday I saw a pretty little dog in the street. It had curly brown hair, short legs, and a long tail.

Credit if one sentence is repeated without a single error.

## Year XVIII

### 1. *Vocabulary*

See page 43.

60 satisfactory definitions if both lists are given; 30 if only one list is given.

### 2. *Lines H, I, J from the Knox Cube Test*

Give the test as described under X 2 above, and credit if one of the three lines is correct.

H 1 4 3 1 2 4      I 1 3 2 4 1 3      J 1 4 2 3 4 1

### 3. *Repeating Eight Digits*

Say, "Now listen. I am going to say over some numbers, and after I am through, I want you to say them exactly as I do. Listen closely, and get them just right." Give (a), and if necessary (b) and (c).

## Year XVIII

(a) 7, 2, 5, 3, 4, 8, 9, 6; (b) 4, 9, 8, 5, 3, 7, 6, 2; (c) 8, 3, 7, 9, 5, 4, 8, 2.

Credit if one set is reproduced without error.

### 4. Repeating Thought of Passage

Say, "I am going to read a little selection of about six or eight lines. When I am through I will ask you to repeat as much of it as you can. It doesn't make any difference whether you remember the exact words or not, but you must listen carefully so that you can tell me everything it says." Read (a), and if necessary (b), recording response verbatim. Urge S. to give thought of selection in his own words, if he hesitates. Each selection should be read in about  $\frac{1}{2}$  minute.

(a) Many opinions have been given on the value of life. Some call it good, others call it bad. It would be nearer correct to say that it is mediocre; for on the one hand our happiness is never as great as we should like, and on the other hand our misfortunes are never as great as our enemies would wish for us. It is this mediocrity of life which prevents it from being radically unjust.

(b) Tests, such as we are now making, are of value both for the advancement of science and for the information of the person who is tested. It is important for science to learn how people differ and on what factors these differences depend. If we can separate the influence of heredity from the influence of environment, we may be able to apply our knowledge so as to guide human development. We may thus in some cases correct defects and develop abilities which we might otherwise neglect.

Credit if main thoughts of one of the selections are given in reasonably consecutive order. (See *The Measurement of Intelligence*, pp. 340-343.)

### 5. Seven Digits Backwards

Say, "Listen carefully, I am going to read some numbers, and I want you to say them backwards. For example, if I should say 5-1-4, you would say 4-1-5. Do you understand?" Then, "Ready now; listen carefully, and be sure to say the numbers backwards." If S. gives the digits forwards, repeat instructions. If necessary, give (b) and (c), repeating each time: "Ready now; listen carefully, and be sure to say the numbers backwards."

(a) 4, 1, 6, 2, 5, 9, 3; (b) 3, 8, 2, 6, 4, 7, 5; (c) 9, 4, 5, 2, 8, 3, 7.

Credit if one set is repeated backwards without error.

## Year XVIII

### 6. Differences Between Abstract Terms

(Terman XVI 3)

Ask, "What is the difference between:—

- (a) "Laziness and idleness?"
- (b) "Poverty and misery?"
- (c) "Character and reputation?"
- (d) "Evolution and revolution?"

If answer is ambiguous, get S. to explain. If he merely defines the words, say, "Yes, but I want you to tell me the difference between \_\_\_\_\_ and \_\_\_\_\_."

Credit if three of the four answers are given correctly.  
(See *The Measurement of Intelligence*, pp. 325-326.)

### Vocabulary Test for Years X to XVIII

"I want to find out how many words you know. Listen; and when I say a word, you tell me what it means. What is an orange?" etc. If S. can read, let him see the words on the vocabulary lists. Continue in each list till 6 or 8 successive words have been missed. If S. thinks formal definition is required, say: "Just tell me in your own words; say it any way you please. All I want is to find out whether you know what a \_\_\_\_\_ is." May ask S. to explain what he means if it is not clear.

Time may be saved, with little loss of accuracy, by giving one list only, and in this case list 1 should be used. The standards required for passing are as follows:

	<i>If both lists are given</i>	<i>If one list is given</i>
X.....	20.....	10.....
XII.....	30.....	15.....
XIV.....	40.....	20.....
XVI.....	50.....	25.....
XVIII.....	60.....	30.....

<b>List 1</b>	<b>List 2</b>
1. gown	1. orange
2. tap	2. bonfire
3. scorch	3. straw
4. puddle	4. roar
5. envelope	5. haste
6. rule	6. afloat
7. health	7. guitar
8. eye-lash	8. mellow
9. copper	9. impolite.
10. curse	10. plumbing

11. pork	11. noticeable
12. outward	12. muzzle
13. southern	13. quake
14. lecture	14. reception
15. dungeon	15. majesty
16. skill	16. treasury
17. ramble	17. misuse
18. civil	18. crunch
19. insure	19. forfeit
20. nerve	20. sportive
21. juggler	21. apish
22. regard	22. snip
23. stave	23. shrewd
24. brunette	24. repose
25. hysterics	25. peculiarity
26. Mars	26. conscientious
27. mosaic	27. charter
28. bewail	28. coinage
29. priceless	29. dilapidated
30. disproportionate	30. promontory
31. tolerate	31. avarice
32. artless	32. gelatinous
33. depredation	33. drabble
34. lotus	34. philanthropy
35. frustrate	35. irony
36. harpy	36. embody
37. flaunt	37. swaddle
38. ochre	38. exaltation
39. milksop	39. infuse
40. incrustation	40. selectman
41. retroactive	41. declivity
42. ambergris	42. laity
43. achromatic	43. fen
44. perfunctory	44. sapient
45. casuistry	45. cameo
46. piscatorial	46. theosophy
47. sudorific	47. precipitancy
48. parterre	48. paleology
49. shagreen	49. homunculus
50. complot	50. limpet

A definition is satisfactory if it gives one correct meaning for the word, regardless of whether that meaning is the most common one, and however poorly it may be expressed.

In *The Measurement of Intelligence*, pp. 227-228, Terman gives the following examples of responses entitled to full credit, half credit or no credit.

1. Orange. "An orange is to eat." "It is yellow and grows on a tree." (Both full credit.)
2. Bonfire. "You burn it outdoors." "You burn some leaves or things." "It's a big fire." (All full credit.)
3. Roar. "A lion roars." "You holler loud." (Full credit.)
4. Gown. "To sleep in." "It's a nightie." "It's a nice gown that ladies wear." (All full credit.)
7. Puddle. "You splash in it." "It's just a puddle of water." (Full credit.)
9. Straw. "It grows in the field." "It means wheat straw." "The horses eat it." (All full credit.)
10. Rule. "The teacher makes rules." "It means you can't do something." "You make marks with it," *i.e.*, a ruler, often called a rule by school children. (All full credit.)
11. Afloat. "To float on the water." "A ship floats." (Both full credit.)
12. Eyelash. If the child says, "It's over the eye," tell him to point to it, as often the word is confused with eyebrow.
14. Copper. "It's a penny." "It means some copper wire." (Full credit.)
15. Health. "It means good health or bad health." "It means strong." (Full credit.)
17. Guitar. "You play on it." (Full credit.)
18. Mellow. If the child says, "It means a mellow apple," ask what kind of apple that would be. For full credit the answer must be "soft," "mushy," etc.
19. Pork. If the answer is "meat," ask what animal it comes from. Half credit if wrong animal is named.
20. Plumbing. "You fix pipes." (Full credit.)
21. Southern. If the answer is "Southern States," or "Southern California," say: "Yes, but what does 'southern' mean?" Do not credit unless explanation is forthcoming.
26. Noticeable. "You notice a thing." (Full credit.)
29. Civil. "Civil War." (Failure unless explained.) "It means to be nice." (Full credit.)
30. Treasury. Give half credit for definitions like "valuables," "lots of money," etc.; *i.e.*, if the word is confused with *treasure*.
32. Ramble. "To go about fast." (Half credit.)
38. Nerve. Half credit if the slang use is defined, "You've got nerve."

- 41. Majesty. "What you say to a king." (Full credit.)
- 45. Sportive. "To like sports." (Half credit.) "Playful" or "happy." (Full credit.)
- 46. Hysterics. "You laugh and cry at the same time." "A kind of sickness." "A kind of fit." (All full credit.)
- 48. Repose. "You pose again." (Failure.)
- 52. Coinage. "A place where they make money." (Half credit.)
- 56. Dilapidated. "Something that's very old." (Half credit.)
- 58. Conscientious. "You're careful how you do your work." (Full credit.)
- 60. Artless. "No art." (Failure unless correctly explained.)
- 61. Priceless. "It has no price." (Failure.)
- 66. Promontory. "Something prominent." (Failure unless child can explain what it refers to.)
- 68. Milksop. "You sop up milk." (Failure.)
- 73. Harpy. "A kind of bird." (Full credit.)
- 80. Exaltation. "You feel good." (Full credit.)
- 85. Retroactive. "Acting backward." (Full credit.)
- 92. Theosophy. "A religion." (Full credit.)

#### **Materials needed when giving the Binet Tests to the Blind**

- III    2 Key, penny, watch and book
- IV    1 Card with two raised lines 28 mm. apart
  - 2 Two cubes, 15 and 22 mm. on a side
  - 3 Four pennies
- V    1 Two weights, 3 and 15 grams
  - 6 Block, spoon and book
- VI    2 Four mutilated celluloid dolls—head missing, right arm missing, left leg missing, right hand missing
  - 3 Thirteen pennies
- VII   4 Two shoe strings
- VIII   4 Six coins — nickel, penny, quarter, dime, silver dollar, half-dollar
- IX    2 Three small cubes and three larger cubes or boxes
- X    1 Vocabulary in Braille
- XII   3 Five weights — 3, 6, 9, 12, and 15 grams
- XVI   4 Four cardboard boxes of different sizes

## Terman's Lists of Digits

### Forwards:

6 4 1	3 5 2	8 3 7
4 7 3 9	2 8 5 4	7 2 6 1
3 1 7 5 9	4 2 8 3 5	9 8 1 7 6
3 7 4 8 5 9	5 2 1 7 4 6	
2 1 8 3 4 6 9	9 7 2 8 4 3 5	
7 2 5 3 4 8 9 6	4 9 8 5 3 7 6 2	8 3 7 9 5 4 8 2

### Backwards:

1 4	9 2	5 7
2 8 3	4 2 7	9 5 8
6 5 2 8	4 9 3 7	8 6 2 9
3 1 8 7 9	6 9 4 8 2	5 2 9 6 1
4 7 1 9 5 2	5 8 3 2 9 4	7 5 2 6 3 8
4 1 6 2 5 9 3	3 8 2 6 4 7 5	9 4 5 2 8 3 7





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